Campbell Grazing Allotment (#878)
Rangeland Health Standards Assessment

The Campbell grazing allotment is located in eastern Klamath County, about 5 miles west of Gerber Reservoir (see attached map). It has about 1,465 acres of BLM land and about 3,140 acres of intermingled private lands. The Goodlow Rim splits the allotment into two distinct portions. The current licensed grazing is for 47 AUMs by horses with a season of use from 5/1 through 10/26. There is also an Exchange-of-Use on the private lands for 173 AUMs of horse use.

Campbell is a "C" category allotment for monitoring purposes. There are no current range monitoring studies established. The information and observations from the completed Rangeland Health Evaluation Summary Worksheets and the input of resource specialists will be used to determine whether this allotment is meeting the five Standards for Rangeland Health.

Throughout this assessment the two geographically disconnected portions of this allotment will be referred to as the "upper portion" and the "lower portion." The upper portion is the area above the Goodlow Rim and the lower portion is the area below the Goodlow Rim.

Standard 1 - Watershed Function-Uplands

Information from the Rangeland Health Evaluation Summary Worksheets for this allotment and the general observations of the team involved in the data gathering give a good assessment of the current upland conditions.

An Ecological Site Inventory (ESI) has not been completed on this allotment. The upper portion of the allotment would likely have multiple ecological sites as defined by the ESI. These would include Pine-Mahogany-Fescue, Shrubby Loam, Ephemeral Lakebed, and possibly a Juniper-Mahogany-Fescue site. The Ecological Sites in the lower portion of the allotment would likely include Shallow Stony, Shrubby Loam, and Juniper Claypan.

The upper portion of the allotment supports a very healthy mountain big sagebrush community with a vigorous perennial grass component dominated by Idaho fescue. Other common shrub species in the area include mountain mahogany and antelope bitterbrush. Throughout the upper portion there are also ponderosa pine stands of varying densities with mountain mahogany and an understory of Idaho fescue, bluebunch wheatgrass, poa species, and various forbs. Scattered throughout both the sagebrush and pine communities are western junipers of various age classes. There are what would be considered "old growth" junipers present, but there appears to be an increasing level of young junipers that are beginning to have negative effects on the vegetation communities. In the big sage areas, the increase in young junipers is resulting in a decrease in the sage as evidenced by the higher amounts of dead sage remnants.

Throughout the upper portion, there is little evidence of recent livestock use, timber harvest or other surface-disturbing activities. One small area has had some of the junipers removed from a mountain mahogany stand within the last 3-10 years.

With the good vegetation conditions and general lack of disturbance, there is more than adequate protection for the soil resource in the upper portion of the allotment. The vegetation community is providing good plant cover and litter distribution which in turn is supplying organic matter to the soil. No soil erosion problems were noted during the field observations.

The lower portion of the allotment has both low sage and big sage communities. The big sage community basically parallels the bottom of the Goodlow Rim. Both pine and juniper trees are found throughout this stretch in varying densities. Most of the area would be a Shrubby Loam ecological site with some areas of Pine-Mahogany-Fescue. Both of these potential sites are invaded and negatively affected by junipers. In areas of dense juniper, the shrub component is either missing or only barely hanging on. There were lots of dead sagebrush and mahogany remnants in these areas. Perennial grass species were also very sparse in these areas. In the more open areas that lacked juniper, there were good stands of mountain big sagebrush with perennial grasses including bluebunch wheatgrass, Idaho fescue, and poa species. In the few pine areas without many junipers, there were good stands of mountain mahogany with some antelope bitterbrush scattered throughout and a good understory of mixed perennial grasses.

The changing vegetation communities within the dense juniper areas are negatively affecting the soil resources. There are large bare soil areas within these juniper stands with some cover of juniper needles immediately under the trees. The lack of shrubs and grasses in these areas is resulting in increased potential for soil loss. The root structures of the shrubs and grasses would provide soil holding capabilities as well as additional litter cover. The water flow patterns and potential infiltration are also being negatively affected by the dense overstory of junipers.

The low sage community is located to the west of the Goodlow Rim in portions of sections 13 and 14. Most of this area would be classified by ESI as either Shallow Stony or Juniper Claypan. The vegetation in these areas is dominated by low sagebrush and Sandberg's bluegrass. Many areas have been invaded by exotic annual brome species. There are also areas with native annuals including vulpia and annual hairgrass at higher than desired levels for these ecological sites. These annual species, both native and exotic, appear to be having a negative effect on the amount and vigor of the low sagebrush.

Soil loss in these areas does not appear to be a problem. The species that are present are providing good surface protection. The surface also has a high amount of rocks and gravels that armor the soils from raindrop impact and runoff.

Current livestock grazing in the allotment is not having a negative impact on the uplands. The water sources below Goodlow Rim are all located on adjacent private lands. The BLM lands are receiving minor use as the animals trail through. The upper portion of the allotment does not appear to receive much if any grazing by livestock. This is likely due to the location above the

rim and the unfenced boundaries.

Overall, this allotment is meeting the Standard for Watershed Function-Uplands. The increase in junipers is beginning to have a negative impact on some of the vegetation communities and active management of these areas should be pursued. Current livestock use in the allotment is not creating significant impacts.

Standard 2 - Watershed Function-Riparian/Wetland Areas

Within the Campbell allotment, there are a limited number of riparian areas. In the upper portion, Pankey Lake is a shallow reservoir that appears to hold water into early summer in average years. About ½ of the reservoir is on BLM lands with the remainder on Forest Service land. The current vegetation in the reservoir bottom is in good condition, dominated by eleocharis and sedge species. There are also several small intermittent and ephemeral drainages in the allotment. Some of these have had waterholes constructed across them on the private lands. These drainages generally lack any riparian vegetation due to the short duration of the spring runoff periods. Most of the channels in the lower portion have low gradient channels with vegetation similar to the adjacent uplands and many are well armored by rock. These physical characteristics in combination with the short runoff periods result in relatively small, stable channels. No Proper Functioning Condition (PFC) surveys have been completed for any of the stream segments or wetlands in the allotment. The only stream segment that may support riparian vegetation would be the one that drains out of Pankey Lake. This segment was not visited during the evaluation. Considering the excellent conditions of the surrounding uplands and the relative lack of disturbance factors, this channel is likely in good condition. However, a field survey of this channel could be completed in the near future.

This Standard is currently being met on this allotment.

Standard 3 - Ecological Processes

As discussed above under Standard 1, most of the vegetation communities in this allotment have good plant composition and community structure. A small portion of the allotment below the Goodlow Rim is being invaded by junipers which are having some negative effects on both the composition and structure. This is also having a negative effect on the soils in this area. With the declining amounts and varieties of shrubs and grasses in these thick juniper stands, there is a corresponding decrease in the surface litter and organic matter being incorporated into the soil and the root occupancy in the soil profile. The decreased diversity of species within these stands is also negatively affecting the total biological activity including plant growth, herbivory, and rodent, insect and microbial activity.

In the upper portion of the allotment the vegetation communities are presently in late seral or PNC condition. There are small junipers that are starting to invade some of the pine and

sagebrush vegetation communities. If these areas are not managed to slow the juniper increase, a shift in conditions to a lower ecological state may occur.

The majority of this allotment is meeting this Standard. Good vegetation communities are present that are allowing the various ecological processes of energy flow and nutrient cycling to occur. There are also no known populations of noxious weeds in the allotment. The small area with the dense juniper stands should receive treatment in the near future to recover the community structure and composition. Treatment of the junipers in the upper portion should also be considered.

Standard 4 - Water Quality

As stated under Standard 2 above, there are a limited number of surface water features in the Campbell allotment. Pankey Lake, a shallow reservoir in the northeast corner of the upper portion of the allotment is filled by snowmelt during the spring runoff period. In an average year, it would have some water until midsummer. Most of the year, due to its shallow nature, it would be classified as a seasonal wetland. The vegetation community is in good condition and dominated by eleocharis and sedge species. There appears to be little livestock use of this area due to its position above the Goodlow Rim. Most livestock activity is below the rim.

Some of the intermittent drainages in the allotment have water catchments on them on the private land. These have minor effect on the BLM portions of these drainages. These small drainages flow in response to snowmelt and spring runoff and then dry up for the remainder of the year. Due to these short-term flows, these drainages have vegetation that is similar to the surrounding uplands.

No water quality studies have been completed on the allotment due to the short term nature of the water features.

This Standard is being met on the Campbell allotment.

Standard 5 - Native, T&E, and Locally Important Species

The different plant communities discussed under Standard 1 are all in good condition, except for a small area that is being affected by increasing juniper populations. The composition, age class distribution, and productivity of these communities are providing a range of habitats to support the animal and plant species that depend upon them. The lower portion is considered big game winter range. Treatment of the invading junipers to maintain a healthy sage and mountain mahogany community would benefit these species. There are no known Special Status species in the allotment.

This Standard is being met in the Campbell allotment. The current livestock use in the allotment

is not having a negative affect on the plant and animal communities.

Management Recommendations
The current licensed livestock grazing in this allotment is for 37 horses which includes the Exchange-of-Use for the intermingled private land. From field observations, it appears that some limited use is being made by cattle with little sign of horse use. This has not resulted in any resource concerns, but the permit may need to be reviewed and changed if cattle are the primary livestock on the allotment.

Most of the allotment is in late seral to PNC condition. The one exception would be the area discussed above that is being invaded by junipers. This area still has some understory of shrubs and grasses that would greatly benefit from a juniper reduction project. Big sage communities are limited on BLM lands in this part of the KFRA and treatment of this area should receive high priority due to the wildlife habitat potential.

Contributors/Reviewers	**Title**
Bill Lindsey	Rangeland Management Specialist
Dana Eckard	Rangeland Management Specialist
Lou Whiteaker	Botanist
Gayle Sitter	Wildlife Biologist
Scott Snedaker	Fishery Biologist
Mike Turaski	Hydrologist
Barbara Ditman	Supervisory NRS

Determination

( ) Existing grazing management practices and/or levels of grazing use on the Campbell grazing allotment promotes achievement or significant progress toward the Oregon Standards for Rangeland Health and conforms with the Guidelines for Livestock Grazing

Management.

( ) Existing grazing management practices and/or levels of grazing use on the Campbell grazing allotment will require modification or change prior to the next grazing season to promote achievement of the Oregon Standards for Rangeland Health and conform with the Guidelines for Livestock Grazing Management.

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Field Manager, Klamath Falls Resource Area Date